

KOOTENAI COUNTY WATER DISTRICT #1 (PWSNO 1280106) SOURCE WATER ASSESSMENT REPORT

October 22, 2001



State of Idaho Department of Environmental Quality

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Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. This assessment is based on a land use inventory of the designated assessment area and sensitivity factors associated with the watershed characteristics.

This report, *Source Water Assessment for Kootenai County Water District #1.*, describes the public drinking water system, the zone boundary of water contribution, and the associated potential contaminant sources located within the boundary. This assessment, taken into account with local knowledge and concerns, should be used as a planning tool to develop and implement appropriate protection measures for this source. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The Kootenai County Water District #1. public drinking water supply comes from an intake in Bennett Bay on the north side of Coeur d'Alene Lake. The intake collection pipe runs laterally from a wet well platform in the bay to a depth of 40 feet. Coeur d'Alene Lake is an unprotected source subject to fluctuations in turbidity from seasonal runoff. The lake is vulnerable to contamination from heavily used roads, from intensive recreational use, and from residential, agricultural, timber, mining and other industrial sites on along the lake shore and in the watershed. Because of its location, the intake would be especially vulnerable to hazardous material releases resulting from accidents on Interstate 90.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

For Kootenai County Water District #1., source water protection efforts should focus on cooperative activities with other public water systems, private and public agencies involved in water quality programs encompassing the entire Coeur d'Alene-St Joe Basin. Partnerships with federal, state and local agencies and industry groups should be established and are critical to success. Due to the fairly short time associated with the movement of surface waters, source water protection activities should be aimed at short-term management strategies with the development of long-term management strategies to counter any future contamination threats

A community with a fully developed source water protection program will incorporate many strategies. For assistance in developing protection strategies please contact your regional IDEQ office or the Idaho Rural Water Association.

SOURCE WATER ASSESSMENT FOR KOOTENAI COUNTY WATER DISTRICT #1

Section 1. Introduction - Basis for Assessment

The following sections contain information necessary to understand how and why this assessment was conducted.

It is important to review this information to understand what the ranking of this source means. A map showing the delineated source water assessment area, a map showing the entire watershed contributing to the delineated area and the inventory of significant potential sources of contamination identified within the delineated area are included. The worksheet used to develop the assessment also is attached.

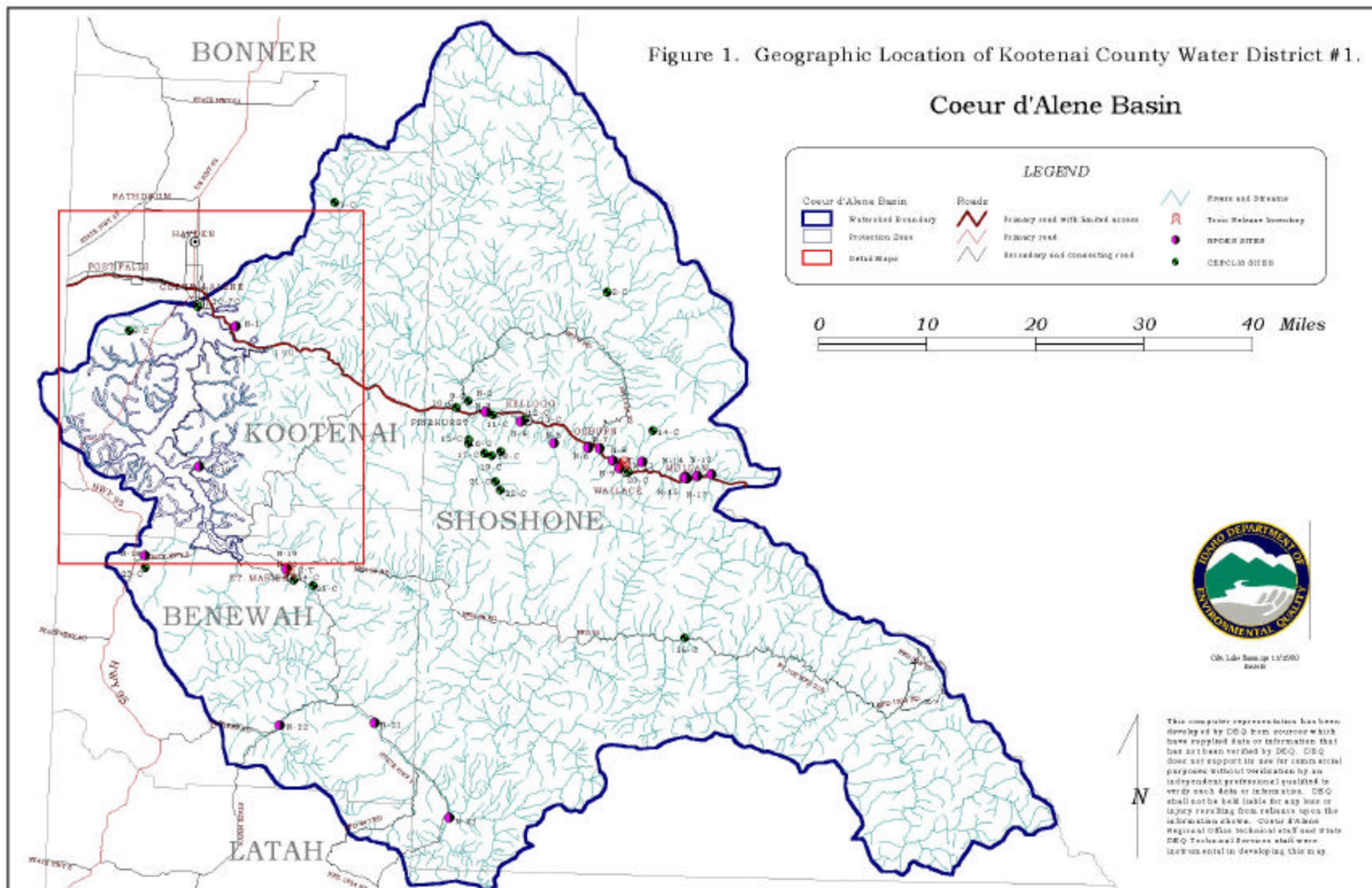
Background

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative susceptibility to contaminants regulated by the Safe Drinking Water Act. This assessment is based on a land use inventory of the delineated assessment area and sensitivity factors associated with the intakes and watershed characteristics.

Level of Accuracy and Purpose of the Assessment

Since there are over 2,900 public water sources in Idaho, time and resources to accomplish the assessments are limited. All assessments must be completed by May of 2003. An in-depth, site-specific investigation of each significant potential source of contamination is not possible. **Therefore, this assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The ultimate goal of the assessment is to provide data to local communities to develop a protection strategy for their drinking water supply.. The Idaho Department of Environmental Quality (IDEQ) recognizes that pollution prevention activities generally require less time and money to implement than treatment of a public water supply system once it has been contaminated. IDEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a source water protection program should be determined by the local community based on its own needs and limitations. Source water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.



Section 2. Conducting the Assessment

General Description of the Source Water Quality

The Kootenai County Water District #1. water system serves a community of approximately 450 people, located on the north side of Coeur d'Alene Lake. (Figure 1). Kootenai County Water District #1. drinking water comes from an intake in Bennett Bay on Coeur d'Alene Lake. The intake depth is 40 feet.

An important water quality issue currently facing Kootenai County Water District #1 is the susceptibility of the intake to hazardous materials releases from accidents on I 90 or on Sunnyside Road. Runoff from septic systems located above Bennett Bay is another potential threat in the immediate vicinity of the intake. Contaminants from communities, agriculture, mining and other industries in the Coeur d'Alene-St Joe Basin enter the lake during periods of high runoff. Another concern is nutrient loading from septic systems serving the houses that line the lakeshore.

Nitrate in concentrations ranging from 0.023 mg/l to 0.072 mg/l was detected in the water in 1980, 1983, 1986, 1989 and 1992, but has not been detected since. The Maximum Contaminant Level (MCL) for nitrate is 10 mg/l. Fluoride(MCL 4 mg/l) was detected at concentrations of 0.11 mg/l and 0.12 mg/l in 1980 and 1983 respectively but not in subsequent samples. The solvent tetrachloroethylene (MCL 5 micrograms per liter), possibly leaching from PVC pipes, was present in samples taken in May and September 1990 at concentrations of 2.23 and 2.1 micrograms per liter respectively. 0.06 micrograms per liter of the chemical were present in a sample tested in September 1993. It was not detected during routine testing in 1996, 1998 and 1999.

From June 1994 to June 1996 Kootenai County Water District #1 participated in a voluntary study monitoring lead and cadmium levels in the waters of Coeur d'Alene Lake before treatment at the filtration plant. The cadmium concentration was less than 0.5 micrograms per liter in 13 of the 14 samples analyzed during the study. It tested at 0.6 micrograms per liter in September 1994. The MCL for cadmium is 5.00 micrograms per liter. The lead concentration varied from less than 0.5 micrograms/liter to a high of 10 micrograms per liter in May 1996 when the untreated lake water was turbid from unusually high spring flooding. The action level for lead is 15 micrograms per liter.

Defining the Zones of Contribution--Delineation

To protect surface water systems from potential contaminants, the EPA required that the entire drainage basin be delineated upstream from the intake to the hydrologic boundary of the drainage basin (U.S. EPA, 1997b). The EPA recognized that an intake on a large water body could have an extensive drainage basin. Therefore, the EPA recommended that large drainage basins be segmented into smaller areas for the purpose of implementing a cost-effective potential contaminant inventory and susceptibility analysis. The delineation process established the physical area around an intake that became the focal point of the assessment. For Kootenai County Water District #1. a lake buffer zone extending 500 feet from the shoreline around the circumference of the lake was mapped. In addition to the buffer zone around the lake itself, creeks and rivers discharging into the lake were delineated. This stream buffer zone extends from the lake up the rivers or streams and their tributaries to a distance of 25-miles from the intake, or to the 4-hour streamflow time-of-travel boundary, whichever is greater (Figure 2). The entire water surface area of the lake along with the 500' buffer around the lake is also the 24-hour emergency response delineation for Kootenai County Water District #1.

A map of the entire watershed, showing locations of highways and any Superfund sites (CERCLIS), Toxic Release Inventory sites or National Pollutant Discharge Elimination System (NPDES) facilities which could pose a threat to the lake, is also included (Figure 1). The presence of these sites in the watershed was factored into the susceptibility analysis for the Kootenai County Water District #1. lake intake. The data used by IDEQ in determining the source water assessment delineation are available upon request.

Identifying Potential Sources of Contamination

A potential source of contamination is defined as any facility or activity that stores, uses, or produces, as a product or by-product, the contaminants regulated under the Safe Drinking Water Act and has a sufficient likelihood of releasing such contaminants at levels that could pose a concern relative to drinking water sources. The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of surface water contamination. The locations of potential sources of contamination within the delineation areas were obtained by field surveys conducted by IDEQ and from available databases.

The watershed for Coeur d'Alene Lake covers parts of Shoshone, Benewah, Kootenai, Bonner, Latah and Clearwater Counties in north Idaho. It encompasses a number of small towns where mining and logging are the primary economic activities. The vast majority of the land in the basin is publicly owned. Most of the agricultural land in the basin is located south and west of the lake. Land in the buffer zone around the lake is mostly privately owned and has been heavily developed for year-round and summer homes. The lake itself gets intensive recreational use.

It is important to understand that a release may never occur from a potential source of contamination provided they are using best management practices. Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. Therefore, when a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation. There are a number of methods that water systems can use to work cooperatively with potential sources of contamination. These involve educational visits and inspections of stored materials. Many owners of such facilities may not even be aware that they are located near a public water supply intake.

Contaminant Source Inventory Process

A contaminant inventory of the study area was conducted by IDEQ. It involved identifying and documenting potential contaminant sources within the Kootenai County Water District #1. Source Water Assessment Area through the use of computer databases and Geographic Information System (GIS) maps developed by IDEQ. John Shields reviewed the maps for Kootenai County Water District #1. Changes he suggested along with potential contaminants inventoried by water system operators whose assessment areas overlap the Kootenai County Water District #1 assessment area are included in the analysis.

A total 108 potential contaminant sites are located within the lake and stream buffer zones. 51 major sites are located in the watershed but outside of the buffer zone (see Table 1). There are duplicates in some instances because a site was documented on more than one database. Most of the potential contaminant sources within delineated source water areas are clustered in and around the Coeur d'Alene.

Because of the direction of water flow in the lake it is unlikely that a contaminant release at Coeur d'Alene would affect water quality at the Kootenai County Water District #1 intake. Potential contaminant sources located in the buffer zone around the lake and tributary streams include septic tanks, petroleum storage tanks, waste water land application sites, a landfill, roads, mines and a number of small business where contaminants of concern may be used (Figure 2). Table 1 lists the potential contaminants of concern and the information source.

Table 1. Kootenai County Water District #1. Potential Contaminant Inventory

Buffer Zone Map ID	Description	Potential Contaminant	Source of Information
1	PARK, CLOSED STORAGE TANK	SOC, VOC	LUST Database
2	PARK, CLOSED STORAGE TANK	SOC, VOC	LUST Database
3	RESORT, CLOSED STORAGE TANK	SOC, VOC	LUST Database
4	CLOSED STORAGE TANK	SOC, VOC	LUST Database
5	MAINTENANCE SHOP, CLOSED STORAGE TANK	SOC, VOC	LUST Database
6	RESORT, CLOSED STORAGE TANK	SOC, VOC	LUST Database
7	CLOSED STORAGE TANK	SOC, VOC	LUST Database
8	RESORT, CLOSED STORAGE TANK	SOC, VOC	LUST Database
9	CLOSED STORAGE TANK	SOC, VOC	LUST Database
10	CLOSED STORAGE TANK	SOC, VOC	LUST Database
11	PARK RESORT, CLOSED STORAGE TANK	SOC, VOC	LUST Database
12	GAS STATION	SOC, VOC	LUST Database
13	CLOSED STORAGE TANK	SOC, VOC	LUST Database
14	PETROLEUM STORAGE TANK	SOC, VOC	LUST Database
15	CLOSED STORAGE TANK	SOC, VOC	LUST Database
16	CLOSED STORAGE TANK	SOC, VOC	LUST Database
17	SHOP, CLOSED STORAGE TANK	SOC, VOC	LUST Database
18	SEAPLANE SERVICE	SOC, VOC	LUST Database
19	RESORT	SOC, VOC	LUST Database
20	CLOSED PETROLEUM STORAGE TANK	SOC, VOC	LUST Database
21	MARINA	SOC, VOC	LUST Database
22	RESORT	SOC, VOC	LUST Database
23	RESORT	SOC, VOC	LUST Database
24	RESORT	SOC, VOC	LUST Database
25	FIRE STATION	SOC, VOC	LUST Database
26	CITY LOT	SOC, VOC	LUST Database
27	MARINA	SOC, VOC	Business Mailing List
28	CAR RENTAL	SOC, VOC	Business Mailing List
29	EXCAVATING CONTRACTORS	SOC, VOC	Business Mailing List
30	CLOSED AUTOMOTIVE REPAIR SHOP	SOC, VOC	Business Mailing List

Table 1. Kootenai County Water District #1. Potential Contaminant Inventory

Buffer Zone Map ID	Description	Potential Contaminant	Source of Information
31	CAMPGROUNDS	microbial	Business Mailing List
32	GENERAL CONTRACTORS	SOC, VOC	Business Mailing List
33	MARINE CONTRACTORS	SOC, VOC	Business Mailing List
34	MINE	IOC	Business Mailing List
35	PHOTOGRAPHER	IOC	Business Mailing List
36	MARINE EQUIPMENT & SUPPLIES	SOC, VOC	Business Mailing List
37	RESORT & MARINA	SOC, VOC	Business Mailing List
38	BOAT DEALERSHIP	SOC, VOC	Business Mailing List
39	MANUFACTURING	SOC, VOC	Business Mailing List
40	FIRE STATION	SOC, VOC	Business Mailing List
41	WASTEWATER TREATMENT	MICROBIAL	NPDES Database
42	WATER FILTRATION PLANT	SUSPENDED SOLIDS	NPDES Database
43	CITY SHOP	SOC, VOC	RICRIS Database
44	BORROW PIT	IOC	Mine Database
45	PROSPECT	IOC	Mine Database
46	GRAVEL PIT	IOC	Mine Database
47	MINE	IOC	Mine Database
48	GRAVEL PIT	IOC	Mine Database
49	MINE	IOC	Mine Database
50	MINE	IOC	Mine Database
51	PROSPECT	IOC	Mine Database
52	QUARRY	SEDIMENT	Mine Database
53	MINE	IOC	Mine Database
54	CLAY OCCURRENCE	SEDIMENT	Mine Database
55	PEAT OCCURRENCE	IOC,VOC	Mine Database
56	CLAY OCCURRENCE	SEDIMENT	Mine Database
57	MARINA	SOC, VOC	SARA Database
58	MARINA	SOC, VOC	AST Database
59	WASTEWATER LAND APPLICATION	microbial	WLAP Database
60	WASTEWATER LAND APPLICATION	microbial	WLAP Database
61	LANDFILL	microbial, SOC, VOC	LANDFILL DATABASE
62	TRANSPORTATION CORRIDOR	IOC, SOC, VOC	Enhanced inventory
63	DRAINFIELD	microbial	Enhanced inventory
64	DRAINFIELD	microbial	Enhanced inventory
65	DRAINFIELD	microbial	Enhanced inventory
66	DRAINFIELD	microbial	Enhanced inventory
67	DRAINFIELD	microbial	Enhanced inventory
68	SMALL HISTORICAL LANDFILL	microbial, SOC, VOC	Enhanced inventory
69	FILTERED DRAINFIELD AND HOLDING TANKS	microbial	Enhanced inventory
70	SURFACE WATER	microbial	Enhanced inventory
71	BOAT DOCKS	SOC, VOC	Enhanced inventory
72	ROADS	SILT, SOC, VOC	Enhanced inventory
73	DRYLAND AGRICULTURE	SILT, SOC	Enhanced inventory

Table 1. Kootenai County Water District #1. Potential Contaminant Inventory

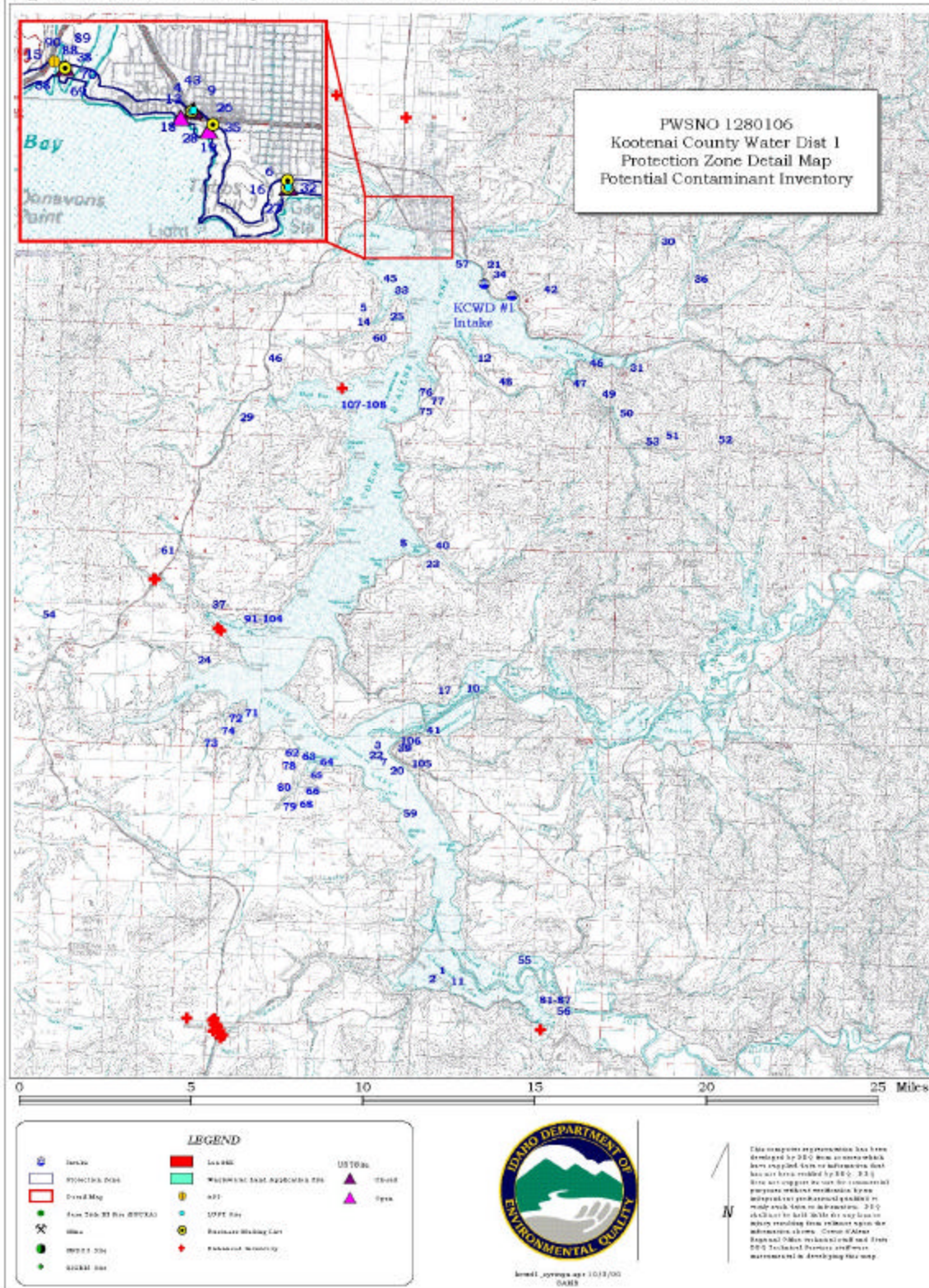
Buffer Zone Map ID	Description	Potential Contaminant	Source of Information
74	ROADS	SILT, SOC, VOC	Enhanced inventory
75	SEPTIC TANK	microbial	Enhanced inventory
76	SEPTIC TANK	microbial	Enhanced inventory
77	SEPTIC DRAINFIELD	microbial	Enhanced inventory
78	STORAGE GARAGE AND WORKSHOP	SOC, VOC	Enhanced inventory
79	ABOVE GROUND FUEL STORAGE	SOC, VOC	Enhanced inventory
80	FIELD DRAINAGE	SOC, VOC, Sediment	Enhanced inventory
81	SEPTIC TANK	microbial	Enhanced inventory
82	SEPTIC TANK	microbial	Enhanced inventory
83	SEPTIC TANK	microbial	Enhanced inventory
84	SEPTIC TANK	microbial	Enhanced inventory
85	SEPTIC TANK	microbial	Enhanced inventory
86	SEPTIC TANK	microbial	Enhanced inventory
87	HISTORICAL SEPTIC TANKS	microbial	Enhanced inventory
88	BOAT SERVICE REPAIR STORAGE DOCKS	SOC, VOC	Enhanced inventory
89	HISTORICAL LANDFILL	SOC, VOC, Microbials	Enhanced inventory
90	ABOVE GROUND STORAGE TANK	fuel storage	Enhanced inventory
91	SEPTIC TANK	microbial	Enhanced inventory
92	SEPTIC TANK	microbial	Enhanced inventory
93	SEPTIC TANK	microbial	Enhanced inventory
94	DRAINFIELD	microbial	Enhanced inventory
95	PRIVATE SEWER SYSTEM	microbial	Enhanced inventory
96	SEPTIC TANK AND DRAINFIELD	microbial	Enhanced inventory
97	SEPTIC TANK AND DRAINFIELD	microbial	Enhanced inventory
98	SEPTIC TANK	microbial	Enhanced inventory
99	SEPTIC TANK	microbial	Enhanced inventory
100	SEPTIC TANK AND DRAINFIELD	microbial	Enhanced inventory
101	SEPTIC TANK	microbial	Enhanced inventory
102	SEPTIC TANK	microbial	Enhanced inventory
103	SEPTIC AND HOLDING TANK	microbial	Enhanced inventory
104	HOLDING TANK	microbial	Enhanced inventory
105	CITY SHOP	SOC, VOC	Enhanced inventory
106	SEWING MACHINE FACTORY	SOC, VOC	Enhanced inventory
107	SEPTIC HOLDING TANK	MICROBIAL	Enhanced Inventory
108	FUEL STORAGE TANK	SOC, VOC	Enhanced inventory
Basin Map ID	Description	Potential Contaminant	Source of Information
N-1	H2O TREATMENT	Suspended Solids	NPDES Database
N-2	H2O TREATMENT	Microbial	NPDES Database
N-3	H2O TREATMENT	Microbial	NPDES Database
N-4	MINE	IOC	NPDES Database
N-5	WATER FILTER	Suspended Solids	NPDES Database
N-6	WATER FILTER	Suspended Solids	NPDES Database
N-7	MINE	IOC	NPDES Database

Table 1. Kootenai County Water District #1. Potential Contaminant Inventory

Basin Map ID	Description	Potential Contaminant	Source of Information
N-8	MINE	IOC	NPDES Database
N-9	MINE	IOC	NPDES Database
N-10	H2O TREATMENT	Microbial	NPDES Database
N-11	MINE	IOC	NPDES Database
N-12	MINE	IOC	NPDES Database
N-13	MINE	IOC	NPDES Database
N-14	MINE	IOC	NPDES Database
N-15	MINE	IOC	NPDES Database
N-16	H2O TREATMENT	Microbial	NPDES Database
N-17	MINE	IOC	NPDES Database
N-18	MUNICIPAL	Microbial	NPDES Database
N-19	INDUSTRIAL	VOC	NPDES Database
N-20	MUNICIPAL	Microbial	NPDES Database
N-21	MUNICIPAL	Microbial	NPDES Database
N-22	MUNICIPAL	Microbial	NPDES Database
N-23	MUNICIPAL	Microbial	NPDES Database
1-C	CAMP DUMP	Microbial, SOC, VOC	CERCLA Database
2-C	BRIDGE		CERCLA Database
3-C	PAINT STORE	SOC,VOC	CERCLA Database
4-C	CONCRETE & ASPHALT PLANT	VOC	CERCLA Database
5-C	GROCERY		CERCLA Database
6-C	DRY CLEANER	VOC	CERCLA Database
7-C	AUTO REPAIR, CLOSED	SOC, VOC	CERCLA Database
8-C	ROAD	SOC, SEDIMENT	CERCLA Database
9-C	MOVING COMPANY	VOC	CERCLA Database
10-C	WORK CENTER	Microbial, SOC, VOC,	CERCLA Database
11-C	WOOD TREATMENT	SOC,VOC	CERCLA Database
13-C	MINE	IOC	CERCLA Database
12-C	PHOSPHATE COMPANY	IOC	CERCLA Database
14-C	MINE	IOC	CERCLA Database
15-C	MINE	IOC	CERCLA Database
16-C	TAILINGS	IOC	CERCLA Database
17-C	MILLSITE	IOC	CERCLA Database
18-C	MILLSITE	IOC	CERCLA Database
19-C	TAILINGS	IOC	CERCLA Database
20-C	MILLSITE	IOC	CERCLA Database
21-C	MINE	IOC	CERCLA Database
22-C	MILLSITE	IOC	CERCLA Database
23-C	WOOD TREATMENT	VOC	CERCLA Database
24-C	INDUSTRIAL SITE	VOC	CERCLA Database
25-C	LANDFILL	Microbial, SOC, VOC,	CERCLA Database
26-C	RAILROAD DUMP	SOC,VOC	CERCLA Database
1-T	INDISTRIAL	SOC,VOC	Toxic Release Inventory Database
2-T	INDISTRIAL	SOC,VOC	Toxic Release Inventory Database

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Figure 2. Kootenai County Water District #1, Delineation Map and Contaminant Sources



Section 3. Susceptibility Analyses

Significant potential sources of contamination were ranked as high, moderate, or low risk according to the following considerations: hydrologic characteristics, physical integrity and construction of the intake, land use characteristic, and potentially significant contaminant sources. The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. Therefore, a high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants.

The relative ranking that is derived for each intake is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. The following summaries describe the rationale for the susceptibility ranking.

Intake Construction

The construction of the Kootenai County Water District #1. water system intake directly affects the raw water quality coming into the filtration plant.. The intake is in about 40 feet of water and is near the mouth of a small creek that drains into Bennett Bay. In a Susceptibility Analysis calculated September 25, 2000 by DEQ staff, the intake construction score was 3, highly susceptible, because the intake is without an infiltration gallery, and is located near the mouth of a creek.

Potential Contaminant Source and Land Use

The intake ranked in the moderately susceptible category for contamination by IOC, SOC, VOCs and microbial pollutants. Although there are numerous sites in the buffer zone and basin none of the contaminant sources inventoried are within 1000 feet of the intake. Table 2 summarizes the Susceptibility Analysis categorizations for the Kootenai County Water District #1. intake.

Table 2. Summary of Kootenai County Water District #1 Susceptibility Evaluation

Intake	Contaminant Inventory				System Construction	Final Susceptibility Ranking			
	IOC	VOC	SOC	Microbials		IOC	VOC	SOC	Microbials
CdA Lake	M	M	M	M	H	M	M	M	M

H = High Susceptibility, M = Moderate Susceptibility, Low Susceptibility

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

H* - Indicates source automatically scored as high susceptibility due to presence of either a VOC, SOC or an IOC above the Maximum Contaminant Level in the finished drinking water or the presence of a significant contaminant source within 1000 feet of the intake.

Susceptibility Summary

The Kootenai County Water District #1 drinking water system is most threatened by contaminants from hazardous materials spills from accidents on I 90 and Sunnyside Road. Another threat in the immediate vicinity of the intake is runoff from septic systems above Bennett Bay seeping into the creek that empties into the lake near the intake.

A less pressing threat comes from runoff from communities, agriculture, mining and other industries in the Coeur d'Alene-St Joe Basin entering the lake during periods of high runoff.

Section 4. Options for Source Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

An effective source water protection program is tailored to the particular local source water protection area. A community with a fully developed source water protection program will incorporate many strategies. Because the watershed feeding Coeur d'Alene Lake encompasses such a large area, Kootenai County Water District #1 should participate in programs that address management of the entire basin. Partnerships with federal, state and local agencies, industry and private groups should be established. Public education aimed at individuals and businesses in the vicinity of the intake are also important. Due to the relatively short time involved with the movement of surface water, source water protection activities should be aimed at short-term management strategies with an emphasis on dealing with long-term future impacts from these same sources.

Assistance

Public water supplies and others may call the following IDEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the IDEQ office for preliminary review and comments.

Coeur d'Alene Regional IDEQ Office (208) 769-1422

State IDEQ Office (208) 373-0502

Website: <http://www.deq.state.id.us>

References Cited

Idaho Department of Agriculture, 1998. Unpublished Data.

Idaho Division of Environmental Quality, 1994. Ground Water and Soils Reconnaissance of the Lower Payette Area, Payette County, Idaho. Ground Water Quality Technical Report No. 5. Idaho Division of Environmental Quality. December 1994.

EPA (U.S. Environmental Protection Agency), 1997, State Methods for Delineating Source Water Protection Areas for Surface Water Supplied Sources of Drinking Water, EPA 816-R-97-008, 40p.

U.S. Government Printing Office, 1995, Code of Federal Regulations, 40 CFR 112, Appendix C-III, Calculation of the Planning Distance

Idaho Department of Environmental Quality, 1999, *Protecting Drinking Water Sources in Idaho*.

Attachment A

Kootenai County Water District #1. Susceptibility Analysis Worksheet

The final scores for the susceptibility analysis were determined from the addition of the Potential Contaminant Source/Land Use Score and Source Construction Score.

Final Susceptibility Scoring:

0 - 7 Low Susceptibility

8 - 15 Moderate Susceptibility

> 16 High Susceptibility

Surface Water Susceptibility Report

Public Water System Name : **KOOTENAI COUNTY WATER DIST 1** Source **LAKE CD'A**
 Public Water System Number **1280106**
 :
 11/13/00 3:32:20 PM

1. System Construction

Score

Intake structure properly constructed	NO	1
Infiltration gallery or well under the direct influence of surface water	NO	2
Total System Construction Score		3

2. Potential Contaminant Source / Land Use

IOC Score VOC Score SOC Score Microbial Score

Predominant land use type (land use or cover)	BASALT FLOW, UNDEVELOPED, OTHER	0	0	0	0
Farm chemical use high	NO	0	0	0	
Significant contaminant sources *	NO				
Sources of class II or III contaminants or microbials (Score = # Sources X 2) 8 Points Maximum	present within the small stream segment of the	8	8	8	8
Agricultural lands within 500 feet	NO	0	0	0	0
Three or more contaminant sources	YES	1	1	1	1
Sources of turbidity in the watershed	YES	1	1	1	1

Total Potential Contaminant Source / Land Use Score 10 10 10 10

3. Final Susceptibility Source Score

13 13 13 13

4. Final Source Ranking

Moderate Moderate Moderate Moderate

* Special consideration due to significant contaminant: The source water has no special susceptibility

POTENTIAL CONTAMINANT INVENTORY

LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as **Superfund** is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100-year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.